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EVOLUTION

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EVOLUTION



What in its principle and scope is the force of evolution and how does it work out in the world?

The theory of evolution has been the key-note of the thought of the nineteenth century. It has not only affected all its science and its thought-attitude, but powerfully influenced its moral temperament, its politics and its society. Without it there could not have been that entire victory of the materialistic notion of life and the universe which has been the general characteristic of the age that is now passing,—a victory which for a time even claimed to be definitive,—nor such important corollary effects of this great change as the failure of the religious spirit and the breaking-up of religious beliefs. In society and politics it

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has led to the substitution of the evolutionary for the moral idea of progress and the consequent materialisation of social ideas and social progress, the victory of the economic man over the idealist. The scientific dogma of heredity, the theory of the recent emergence of the thinking human animal, the popular notion of the all-pervading struggle for life and the aid it has given to an exaggerated development of the competitive instinct, the idea of the social organism and the aid it has given to the contrary development of economic socialism and the increasing victory of the organised state of community over the free individual, —all these are outflowings from the same source.

The materialistic view of the world is now rapidly collapsing and with it the materialistic statement of the evolution theory must disappear. Modern European thought progresses with a vertiginous rapidity. If it is Teutonic in its fidelity of observation and its tendency to laborious systematisation, it has also another side, Celtic-Hellenic, a side of suppleness, mobility,

readiness for rapid change, insatiable curiosity. It does not allow the same thought, the same system to exercise for very long a secure empire; it is in haste to question, to challenge, to reject, to remould, to discover new and opposite truths, to venture upon other experiments. At present this spirit of questioning has not attacked the evolution theory at its centre, but it is visibly preparing to give it a new form and meaning.

The general idea of evolution was the filiation of each successive form or state of things to that which preceded it, its appearance by a process of outbringing or deploying of some possibility prepared and even necessitated by previous states and previous tendencies. Not only does a form contain the seed of the form that reproduces it, but also the seed of the possible new form that varies from it. By successive progression a world-system evolves out of the nebula, a habitable planet appears in an uninhabitable system, protoplasmic life emerges by some yet unknown process out of Matter, the more developed grows out of the less developed.

organism. The fish is the descendant of the insect, the biped and quadruped trace back to the fish, man is a quadruped of the genus Ape who has learned to walk erect on two legs and has divested himself of characteristics unsuited to his new mode of life and progression. Force on Matter is the unconscious Goddess who has worked these miracles by her inherent principle of natural adaptation and in the organism by the additional machinery of heredity ; by natural selection those species which reproduce new characteristics developed by adaptation to the environment and favourable to survival, tend to propagate themselves and remain ; others fall back in the race of life and disappear.

Such were once the salient ideas ; but some of them and not the least important are now questioned. The idea of the struggle for life tends to be modified and even denied ; it is asserted that, at least as popularly understood, it formed no real part of Darwinism. This modification is a concession to reviving moralistic and idealistic tendencies which seek for a principle of love

as well as a principle of egoism in the roots of life. Equally important are the conclusions arrived at by investigators into the phenomena of heredity that acquired characteristics are not handed down to the posterity and the theory that it is chiefly predispositions that are inherited ; for by this modification the process of evolution begins to wear a less material and mechanical aspect ; its source and the seat of its motive power are shifted to that which is least material, most psychical in Matter. Finally, the first idea of a slow and gradual evolution is being challenged by a new theory of evolution through sudden and rapid outbursts ; and again we pass from the sense of an obvious superficial machinery and all-sufficient material necessity to profundities whose mystery is yet to be fathomed.

In themselves, indeed, these modifications would not be radical. Their importance lies in their synchronism with a great resurgence in new forms, of old ideas that had been submerged by the materialistic wave. Theories of vitalism, idealistic tendencies of thought, which were supposed to have been

slain by the march of physical Science, now arise, dispute the field and find their account in every change of scientific generalisation which at all opens the way to their own expansion and reassertion. In what respects then is it likely that the evolution theory will be found deficient by the wider and more complex thought of the future and compelled to undergo essential changes ?

In the first place, the materialistic theory of evolution starts from the Sankhya position that all world is a development out of indeterminate Matter by Nature-Force, but it excludes the Silent Cause of the Sankhyas, the Purusha or observant and reflective Soul. Hence it conceives the world as a sort of automatic machine which has somehow happened. No intelligent cause, no aim, no *raison d'être*, but simply an automatic deployment, combination, self-adaptation of means to end without any knowledge or intention in the adaption. This is the first paradox of the theory and its justification must be crushing and conclusive if it is to be finally accepted by the human mind.

Again, Force in indeterminate Matter

without any Conscious-Soul being all the beginning and all the material of things, Mind, Life and Consciousness can only be developments out of Matter and even only operations of Matter. They cannot be at all things in themselves, different from Matter or in the last degree independent of it. This is the second paradox and the point at which the theory has eventually failed to establish itself. More and more the march of knowledge leads towards the view that the three are different forms of Force, each with its own characteristics and proper method of action, each reacting upon the other and enriching its forms by the contact.

An idea has even begun to dawn that there is not a single creation, but a triple,—material, vital and mental ; it may be regarded as a composite of three worlds, as it were, interpenetrating each other. We are led back to the old Vedic idea of the triple world in which we live. And we may reasonably forecast that when its operations are examined from this new standpoint, the old Vedic knowledge will be justified that

it is one Law and Truth acting in all, but very differently formulated according to the medium in which the work proceeds and its dominant principle. The same gods exist on all the planes and maintain the same essential laws, but with a different aspect and mode of working and to ever wider results.

If this be the truth, then the action of evolution must be other than has been supposed. For example the evolution of Life in Matter must have been produced and governed not by a material principle, but by a Life-Principle working in and upon the conditions of Matter and applying to it its own laws, impulses, necessities. This idea of a mighty Life, other than the material Principle, working in it and upon it has begun to dominate the advanced thought of Europe. The other idea of a still mightier Mind working in Life and upon it has not yet made sufficient way because the investigation of the laws of Mind is still in its groping infancy.

Again, the materialist theory supposes a rigid chain of material necessity ; each

previous condition is a co-ordination of so many manifest forces and conditions ; each resulting condition is its manifest result. All mystery, all element of the incalculable disappears. If we can completely analyse the previous conditions and discover their general law, we can be sure of the subsequent result, as in the case of an eclipse or an earthquake. For all is manifestation which is the logical result of a previous manifestation.

Once more the conclusion is too simple and trenchant ; the world is more complex. Besides the manifest causes there are those that are unmanifest or latent and not subject to our analysis. This element increases as we climb the ladder of existence; its scope is greater in Life than in Matter, freer in Mind than in Life. European thought already tends to posit behind all manifest activity an Unmanifest called according to intellectual predilection either the Inconscient or the Subconscient which contains more and in a way unseizable to us knows more and can more than the surface existence. Out of this Unmanifest the manifest constantly emerges.

Again we return towards an ancient truth already known to the Vedic sages,—the idea of an inconscient or subconscient ocean of being, the ocean of the heart of things out of which the worlds form themselves. But the Veda posits also a governing and originating Super-conscient which accounts for the appearance of a hidden consciousness and knowledge pervading the operations of Evolution and which constitutes the self-acting Law and Truth behind them.

The theory of materialistic evolution led naturally to the idea of a slow and gradual progression in a straight line. It admits reversions, atavisms, loops and zigzags of reaction deflecting the straight line, but these must necessarily be subordinate, hardly visible if we calculate by ages rather than by shorter periods of time. Here too, fuller knowledge disturbs the received notions. In the history of man everything seems now to point to alternations of a serious character, ages of progression, ages of recoil, the whole constituting an evolution that is cyclic rather than in one straight line.

A theory of cycles of human civilisation has been advanced, we may yet arrive at the theory of cycles of human evolution, the Kalpa and Manvantaras of the Hindu theory. If its affirmation of cycles of world-existence is farther off from affirmation, it is because they must be so vast in their periods as to escape not only all our means of observation, but all our means of deduction or definite inference.

Instead of slow, steady, minute gradations it is now suggested that new steps in evolution are rather effected by rapid and sudden outbursts, outbreaks, as it were, of manifestation from the unmanifest. Shall we say that Nature preparing slowly behind the veil, working a little backwards, working a little forwards, one day arrives at the combination of outward things which makes it possible for her to throw her new idea into a realised formation, suddenly, with violence, with a glorious dawning, with a grandiose stride? And that would explain the economy of her relapses and her reappearances of things long dead. She aims at a certain immediate result and to arrive at it more

quickly and entirely she sacrifices many of her manifestations and throws them back into the latent, the unmanifest, the subconscious. But she has not finished with them ; she will need them at another stage for a farther result. Therefore she brings them forward again and they reappear in new forms and other combinations and act towards new ends. So evolution advances.

And her material means ? Not the struggle for life only. The real law, it is now suggested, is rather mutual help or at least mutual accommodation. Struggle exists, mutual destruction exists, but as a subordinate movement, a red minor chord, and only becomes acute when the movement of mutual accommodation fails and elbow-room has to be made for a fresh attempt, a new combination.

The propagation of acquired characteristics by heredity was too hastily and completely asserted ; it is now perhaps in danger of being too summarily denied. Not Matter alone, but Life and Mind working upon Matter help to determine evolution. Heredity is only a material shadow of soul-

reproduction, of the rebirth of Life and Mind into new forms. Ordinarily, as a constant factor or basis, there is the reproduction of that which was already evolved ; for new characteristics to be propagated in the species they must have been accepted, received, sanctioned in the vital and mental world ; then only can they be automatically self-reproduced from the material seed. Otherwise they are private and personal acquisitions and are returned into the State exchequer, the treasury of the subconscious, and do not go to the family estate. When the mind-world and life-world are ready, they are poured out freely on fit recipients. This is the reason why it is predisposition that is chiefly inherited. The psychical and vital force in the material principle is first impressed ; when that has been done on a sufficient scale, it is ready for a general new departure and an altered heredity appears.

Thus the whole view of Evolution begins to change. Instead of a mechanical, gradual, rigid evolution out of indeterminate Matter by Nature-Force we move towards the perception of a conscious, supple,

flexible, intensely surprising and constantly dramatic evolution by a superconscient knowledge which reveals things in Matter, Life and Mind out of the unfathomable Unconscient from which they rise.

The Inconscient.

The first or superficial view which the observing mind takes of any object of knowledge is always an illusory view ; all science, all true knowledge comes by going behind the superficies and discovering the inner truth and the hidden law. It is not that the thing itself is illusory, but that it is not what it superficially appears to be ; nor is it that the operations and functionings we observe on the surface do not take place, but that we cannot find their real motive-power, process, relations by the simple study of them as they offer themselves to the observing senses.

In the realm of physical science this is obvious enough and universally admitted. The earth is not flat but round; not still but constant to a double motion ; the sun moves but not round the earth ; bodies that seem to us luminous are in themselves non-luminous ; things that are part of our daily experience, colour, sound, light, air are quite other in their reality than what they

pretend to be. Our senses give us false views of distance, size, relation. Objects which seem to them self-existent forms are aggregations and constituted by subtler constituents which our ordinary faculties are unable to detect. These material constituents again are merely formulations of a Force which we cannot describe as material and of which the senses have no evidence. Yet the mind and the senses can live quite satisfied and convinced in this world of illusions and accept them as the practical truth—for to a certain extent they are the practical truth and sufficient for an initial, ordinary and limited activity.

But only to a certain extent ; for there are possibilities of a wider life, a more mastering action, a greater practicality which can only be achieved by going behind these surfaces and utilising a truer knowledge of objects and forces. The discovery of the secret operations of Nature leads to a contingent discovery, the possibility of a farther use of her forces to which she herself has not proceeded, not finding them necessary for the mere preservation of existence and

its ordinary workings, but has left to man, her mental being, to discover and discover and utilise for the amelioration of existence and for the development of its possibilities.

All this is easy to see in the realm of Matter; but mankind is not yet entirely ready to recognise the same truth and follow up the same principle in the realm of Mind. It is true that psychology has made an advance and has begun to improve its method. Formerly, it was a crude, scholastic and superficial systematisation of man's ignorance of himself. The surface psychological functionings, will, mind, senses, reason, conscience, etc., were arranged in a dry and sterile classification; their real nature and relation to each other were not fathomed nor any use made of them which went beyond the limited action Nature had found sufficient for a very superficial mental and psychic life and for very superficial and ordinary workings. Because we do not know ourselves, therefore we are unable to ameliorate radically our subjective life or develop with mastery, with rapidity, with a sure science the hidden possibilities of our

mental capacity and our moral nature. The new psychology sees indeed to penetrate behind superficial appearances, but it is encumbered by initial errors which prevent a profounder knowledge,—the materialistic error which bases the study of the mind upon the study of the body ; the sceptical error which prevents any bold and clear-eyed investigation of the hidden profundities of our subjective existence ; the error of conservative distrust and recoil which regards any subjective state or experience that departs from the ordinary operations of our mental and psychical nature as a morbidity or a hallucination,—just as the Middle Ages regarded all new science as magic and a diabolical departure from the sane and right limits of human capacity ; finally, the error of objectivity which leads the psychologist to study others from outside instead of seeing his true field of knowledge and laboratory of experiment in himself. Psychology is necessarily a subjective science and one must proceed in it from the knowledge of oneself to the knowledge of others.

But whatever the crudities of the new

science, it has at least taken the first capital step without which there can be no true psychological knowledge and which all must make who deeply study the facts of consciousness, that our waking and surface existence is only a small part of our being and does not yield to us the root and secret of our character, our mentality or our actions. The source lies deeper. To discover them, to know the nature and the processes of the inconscient or subconscient self and, so far as is possible, to possess and utilise them as physical science possesses and utilises the secret of the forces of Nature ought to be the aim of a scientific psychology.

But here the first difficulty confronts us, the problem whether this other and greater self of which our waking existence is only a surface and a phenomenon, is subconscient. And thereon hinges the whole destiny of the human being. For if it is inconscient in its very nature, then we cannot hope to illuminate ourselves with the hidden light of these depths—for light there is none or to find and to possess ourselves of the secret of its power. On the other hand if it is

subconscious, that is to say a concealed consciousness deeper, greater, more powerful than our superficial self, an endless vista of self—enlargement opens out before us and the human race marches towards infinite possibilities.

Modern psychological experiment and observation have proceeded on two different lines which have not yet found their point of meeting. On the one hand psychology has taken for its starting-point the discoveries and the fundamental thesis of the physical sciences and has worked as a continuation of physiology. The physical sciences are the study of inconscient Force working in inconscient Matter a psychology which accepts this formula as the basis of all existence must regard consciousness as a phenomenal result of the inconscient working on the inconscient. Mind is only an outcome and as it were record of nervous reactions. The true self is the inconscient ; mental action is one of its subordinate phenomena. The Inconscient is greater than the conscient ; it is the god, the magician, the creator whose action is far more unerring

than the ambitions but blundering action of the conscious mentality. The tree is more perfectly guided than man in its more limited action, precisely because it lives unambitiously according to Nature and is passive in the hands of the Inconscient. Mind enters in to enlarge the field of activity, but also to multiply errors, perversities, revolts against Nature, departures from the instinctive guiding of the Inconscient, Self which generates that vast element of ignorance, falsehood and suffering in human life,—that “much falsehood in us” of which the Vedic poet complains.

Where then lies the hope that mind will repair its errors and guide itself according to the truth of things? The hope lies in Science, in the intelligent observation, utilising, initiation of the forces and workings of the Inconscient. To take only one instance,—the Inconscient operates by the law of heredity and, left to itself, works faultlessly to insure the survival of good and healthy types. Man misuses heredity in the false conditions of his social life to transmit and perpetuate degeneracy. We

must study the law of heredity, develop a science of Eugenics and use it wisely and remorselessly —with the remorseless wisdom of Nature—so as to ensure by intelligence the result that the Inconscient assures by instinctive adaptation. We can see where this idea and this spirit will lead us,—to the replacement of the emotional and spiritual idealism which the human mind has developed by a cold sane materialistic idealism and an amelioration of mankind attempted by the rigorous mechanism of the scientific expert, no longer by the profound inspiration of genius and the supple aspiration of puissant character and personality. And yet what if this were only another error of the conscient mind? What if the mistaking and the disease, the revolt and departure from Nature were itself a part, a necessary part of the wise and unerring plan of the profound Inconscient Self and all the much falsehood a means of arriving at a greater truth and a more exalted capacity? The fact that genius itself, the highest result of our developing consciousness, flowers so frequently on a diseased branch is a

phenomenon full of troubling suggestions. The clear way of ascertained science need not always be the best way ; it may stand often in the path of development of a yet greater and deeper knowledge.

The other line of psychological investigation is still frowned upon by orthodox science, but it thrives and yields its results in spite of the anathema of the doctors. It leads us into by-paths of psychical research, hypnotism, mesmerism, occultism and all sorts of strange psychological gropings. Certainly, there is nothing here of the assured clearness and firmly-grounded positivism of the physical method. Yet facts emerge and with the facts a momentous conclusion,—the conclusion, that there is a “subliminal” self behind our superficial waking mind, not inconscient but conscient, greater than the waking mind, endowed with surprising faculties and capable of a much surer action and experience, conscient of the superficial mind though of it the superficial mind is inconscient. And then a question rises. What if there were really no Inconscient at all, but a hidden Consciousness

everywhere perfect in power and wisdom of which our mind is the first slow, hesitating and imperfect disclosure, and into the image of which the human mentality is destined progressively to grow? It would at least be no less valid a generalisation and it would explain all the facts that we now know considerably better than the blind and purposeless determinism of the materialistic theory.

In pursuing psychological investigation upon this line we shall only be resuming that which had already been done by our remote forefathers. For they too, the moment they began to observe, to experiment, to look below surface of things, were compelled to perceive that the surface man is only a form and appearance and that the real self is something infinitely greater and more profound. They too must have passed through the first materialistic stages of science and philosophy. For we read in the Aitareya Upanishad that even in entering upon possession of the material world and the body, the Purusha, the Conscious Soul* asks himself, "If utterance is by speech and life by the breath, vision by the eye, hearing by the

ear, thought by the mind," if in short all the apparent activities of the being can be accounted for by the automatic functioning of Nature, "then what am I?" And the Upanishad says farther, "He being born distinguished only the working of the material elements, for what else was there of which he should discuss and conclude?" Yet in the end "he beheld this conscious being which is Brahman utterly extended and he said to himself, "Now I have really seen." So too in the Taittiriya Upanishad Bhrigu Varuni meditating on the Brahman comes first to the conclusion that "Matter is Brahman" and only afterwards discovers Life that Brahman,—so rising from the materialistic to the vitalistic theory of existence as European thought is now rising,—then Mind that is Brahman and then knowledge that is Brahman,—so rising to the sensational and the idealistic realisation of the truth—and at last Bliss of Existence that is Brahman. There he pauses in the ultimate spiritual realisation on which is the highest formulation of knowledge that man can attain.

The Conscient therefore and not the

Inconscient was the Truth at which the ancient psychology arrived ; and it distinguished three strata of the conscient self, the waking, the dream and the sleep selves of Man,—in other words the superficial existence, the superficial existence, the subconscient and the superconscient which to us seems the inconscient because its state of consciousness is the reverse of ours : for ours is limited and based on division and multiplicity, but this is “that which becomes a unity” ours is dispersed in knowledge, but in this other self conscious knowledge is self-collected and concentrated ; ours is between dual experiences, but this is all delight, it is that which in the very heart of our being fronts everything with a pure all-possessing consciousness and enjoys that delight of existence. Therefore, although its seat is that stratum consciousness which to us is a deep sleep,—for the mind there cannot maintain its accustomed functioning and becomes inconscient, yet its name is He who knows, Prajna, “This” says the Mandukya Upanishad, “is omniscient, omnipotent, the inner control, the womb of all and that from which crea-

tures are born and into which they depart." It answers, therefore, closely enough to the modern idea of the Inconscient corrected by the other modern idea of the subliminal self; for it is inconscient only to the waking mind precisely because it is superconscient to it and the mind is therefore only able to seize it in its results and not in itself. And what better proof can there be of the depth and truth of the ancient psychology than the fact that when modern thought in all its pride of exact and careful knowledge begins to cast its fathom into these depths, it is obliged to repeat in other language what had already been written nearly three thousand years ago?

We find the same idea of this inner control repeated in the Gita; for it is the Lord who "sits in the hearts of all creatures and turns all creatures mounted on an engine by his Maya." At times the Upanishad seems to describe this Self as the "mental being leader of the life and the body," which is really the subliminal mind of the psychical investigators; but this is only a relative description. The Vedantic psychology was

aware of other depths that take us beyond this formula and in relation to which the mental being becomes in its turn as superficial as is our waking to our subliminal mind. And now once more in the revolutions of human thought these depths have to be sounded; modern psychology will be led perforce, by the compulsion of the truth that it is seeking, on to the path that was followed by the ancient. The new dawn, treading the eternal path of the Truth, follows it to the goal of the dawns that have gone before,—how many, who shall say?

For this knowledge was not first discovered in the comparatively late antiquity that gave us the Upanishads which we now possess. It is already there in the dateless verses of the Rig Veda, and the Vedic sages speak of it as the discovery of yet more ancient seers besides whom they themselves were new and modern. Emerging from the periods of eclipse the night of ignorance which overtake humanity, we assume always that we are instituting a new knowledge. In reality, we are continually rediscovering the knowledge and repeating

the achievement* of the ages that have gone before us,—receiving again out of the “Inconscient” the light that it had drawn back into its secrecies and now releases once more for a new day and another march of the great journey.

And the goal of that journey cannot be other than the “highest good” which the ancient psychologists proposed to the life and growth of the soul. Man, the mental being once aware that there is this deep, great and hidden self, the real reality of his being, must necessarily seek to enter into it, to become conscisous in it, to make there his centre instead of dwelling on the surface, to win and apply its diviner law and supreme nature and capacity, to make himself one with it so that he shall become the Real instead of the Apparent man. And the sole debate that remains is whether this great conquest can be achieved and enjoyed in this human life and terrestrial body or is only possible beyond—whether in fact the human consciousness is the chosen instrument for the progressive self-revelation of this “Inconscient.” This real self within us, or only a

balked effort with no fruition here or a haphazard and imperfect sketch that can never be perfected into the divine image.

Materialism

Many hard things have been said about materialism by those who preferred to look at life from above rather than below or who claim to live in the more luminous atmosphere of the idealistic mind or ether of the spiritual existence. Materialism has been credited with the creation of great evils, viewed even as the archimage of a detestable transformation or the misleader guiding mankind to an appalling catastrophe. Those whose temperament and imagination dally lovingly with an idealised past, accuse it for the cultural, social, political changes which they abhor, regarding them as a disturbance, happily, they believe, temporary, of eternal moral values and divinely ordained hierarchies. Those, more numerous, who look beyond to the hope of a larger idealism and higher spirituality, proclaim in its decline and passing away a fortunate deliverance for the human spirit. World-wide strife and competition have been, it is said, its fruits, war and the holocaust of terrible sacrifice in which

mankind has been squandering its strength, blood, treasure,—though these are no new calamities, nor would it be safe to hope that they are the last of their kind,—are pointed to as its nemesis or regarded as a funeral pyre it has lighted for itself in whose cruel flame the errors and impurities it brought into existence are being burned to ashes. Science has been declared suspect as a guide or instructor of mankind and bidden to remain parked within her proper limits, because she was for long the ally of the material view of existence, suggester of atheism and agnosticism, victory-bringer of materialism and scepticism, the throne of their reign or pillar of their stability. Reason has been challenged because rationalism and free-thought were appropriated as synonyms of materialistic thinking.

All this wealth of accusation may have and much of it has its truth. But most things that the human mind thus alternately trumpets and bans, are a double skein. They come to us with opposite faces, their good side and their bad; a dark aspect of error and a bright of truth; and it is as we

look upon one or the other visage that we swing to our extremes of opinion or else oscillate between them. Materialism may not be quite as dead as most would declare it to be ; still held by a considerable number of scientific workers, perhaps a majority,—and scientific opinion is always a force both by its power of well-ascertained truth and its continued service to humanity,—it constitutes even now the larger part of the real temper of action and life even where it is rejected as a set opinion. The strong impressions of the past are not so easily erased out of our human mentality. But it is a fact receding force ; other ideas and standpoints are crowding in and, thrust it out from its remaining points of vantage. It will be useful before we say farewell to it, and can now be done with safety, to see what it was that gave to it its strength, what it has left permanently behind it, and to adjust our new view-points to whatever stuff of truth may have lain within it and lent it its force of applicability. Even we can look at it with an impartial sympathy, though only as a primary but lesser truth of our actual being,—for it is all

that, but no more than that,—and try to admit and fix its just claims and values. We can now see too how it was bound to escape from itself by the widening of the very frame of knowledge it has itself constructed.

Admit,—for it is true,—that this age of which materialism was the portentous offspring and in which it had figured first as petulant rebel and aggressive thinker, then as a grave and strenuous preceptor of mankind, has been by no means a period of mere error, calamity and degeneration, but rather a most powerful creative epoch of humanity. Examine impartially its results. Not only has it immensely widened and filled in the knowledge of the race and accustomed it to a great patience of research, scrupulosity, accuracy,—if it has done that only in one large sphere of inquiry, it has still prepared for the extension of the same curiosity, intellectual rectitude, power for knowledge to other and higher fields,—not only has it with an unexampled force and richness of invention brought and put into our hands, for much evil, but also for much good, discoveries, instruments, practical powers,

conquests, conveniences which, however we may declare their insufficiency for our highest interests, yet few of us would care to relinquish but it has also, paradoxical as that might at first seem, strengthened man's idealism. On the whole, it has given him a kindlier hope and humanised his nature. Tolerance is greater, liberty has increased, charity is more a matter of course, peace, if not yet practicable, is growing at least imaginable. Latterly •the thought of the eighteenth century which promulgated secularism has been much scouted and belittled, that of the nineteenth which developed it, riddled with adverse criticism and overpassed. Still they worshipped no mean godheads. Reason, science, progress, freedom, humanity were their ideals, and which of these idols, if idols they are, would we like or ought we, if we are wise, to cast down into the mire or leave as poor unworshipped relics on the wayside? If there are other and yet grater godheads or if the visible forms adored were only clay or stone images or the rites void of the inmost knowledge; yet has their cult been for us a

preliminary initiation and the long material sacrifice prepared us for a greater religion.

Reason is not the supreme light, but yet is it always a necessary light-bringer and until it has been given its rights and allowed to judge and purify our first infra-rational instincts, impulses, rash fervours, crude beliefs, and blind prejudgments, we are not altogether ready for the full unveiling of a greater inner luminary. Science is a right knowledge, in the end only of processes, but still the knowledge of processes too is part of a total wisdom and essential to a wide and a clear approach towards deeper Truth behind. If it has laboured mainly in the physical field, if it has limited itself and bordered or overshadowed its light with a certain cloud of wilful ignorance, still one had to begin this method somewhere and the physical field is the first, the nearest, the easiest for the kind and manner of inquiry undertaken. Ignorance of one side of Truth or the choice of a partial ignorance or ignoring for better concentration on another side is often a necessity of our imperfect mental nature. It is unfortunate if ignorance becomes

dogmatic and denies what it has refused to examine, but still no permanent harm need have been done if this willed self-limitation is compelled to disappear when the occasion of its utility is exhausted. Now that we have founded rigorously our knowledge of the physical, we can go forward with a much firmer step to a more open, secure and luminous repossession of mental and psychic knowledge. Even spiritual truths are likely to gain from it, not a loftier or more penetrating,—that is with difficulty possible,—but an ampler light and a fuller self-expression.

Progress is the very heart of the significance of human life, for it means our evolution into greater and richer being ; and these ages by insisting on it, by forcing us to recognize it as our aim and our necessity, by making impossible hereafter the attempt to subsist in the dullness or the gross beatitude of a stationary self-content, have done a priceless service to the earth-life and cleared the ways of heaven. Outward progress was the greater part of its aim and the inward is the more essential ? but the inward too is not complete if the outward is left out

of account. Even if the insistence of our progress fall for a time too exclusively on growth in one field, still all movement forward is helpful and must end by giving a greater force and a larger meaning to our need of growth in deeper and higher provinces of our being. Freedom is a godhead whose greatness only the narrowly limited mind, the State-worshipper or the crank of reaction can now deny. No doubt, again, the essential is an inner freedom; but if without the inner realisation, the outer attempt at liberty may prove at last a vain thing, yet to pursue an inner liberty and perpetuate an outer slavery or to rejoice in an isolated release and leave mankind to its chains was also an anomaly that had to be exploded, a confined and too self-centred ideal. Humanity is not the highest godhead; God is more than humanity; but in humanity too we have to find and to serve him. The cult of humanity means an increasing kindness, tolerance, charity, helpfulness, solidarity, universality, unity, fullness of individual and collective growth, and towards these things we are advancing much

more rapidly than was possible in any previous age, if still with sadly stumbling footsteps and some fierce relapses. The cult of our other human selves within the cult of the Divine comes closer to us as our large ideal. To have brought even one of these things a step nearer, to have helped to settle them with whatever imperfect expression and formula in our minds, to have accelerated our movement towards them are strong achievements, noble services.

Objection can at once be made that all these great things have no connection with materialism. The impulse towards them was of old standing and long active in the human mind; the very principle of the humanitarianism which has been one of the striking developments of modern sentiment, was first brought out from our nature and made prominent by religion, compassion and the love of man intimately and powerfully enforced by Christianity and Buddhism; if they have now a little developed, it is the natural expanding from seeds that had long been sown. Materialism was rather calculated to encourage opposite instincts;

and the good it favoured, it limited, made arid, mechanised. If all these nobler things have grown and are breaking the bounds set to them, it is because man is fortunately inconsistent and after a certain stage of our development cannot be really and wholly materialistic ; he needs ideals, ethical expansion, a closer emotional fulfilment, and these needs he has tacked on to his development of materialistic opinion and corrected its natural results by them. But the ideals themselves were taken from an anterior opinion and culture.

This is the truth, but not the whole truth. The old religious cultures were often admirable in the ensemble and always in some of their parts, but if they had not been defective, they could neither have been so easily breached, nor would there have been the need of a secularist age to bring out the results the religions had sown. Their faults were those of a certain narrowness and exclusive vision. Concentrated, intense in their ideal and intensive in their effect, their expansive influence on the human mind was small. They isolated too much their action

in the individual, limited too narrowly the working of their ideals in the social order, tolerated for instance, and even utilised for the ends of church and creed, an immense amount of cruelty and barbarism, which were contrary to the spirit and truth from which they had started. What they discouraged in the soul of the individual, they yet maintained in the action and the frame of society, seemed hardly to conceive of a human order delivered from these blots. The depth and fervour of their aspiration had for its shadow a want of intellectual clarity, an obscurity which confused their working and baulked the expansion of their spiritual elements. They nourished too a core of asceticism and hardly cared to believe in the definite amelioration of the earth life, despised by them as a downfall or a dolorous descent or imperfection of the human spirit, or whatever earthly hope they admitted, saw itself postponed to the millennial end of things. A belief in the vanity of human life or of existence itself suited better the preoccupation with an aim beyond earth. Perfection, ethical growth, liberation became individual

ideals and figured too much as an isolated preparation of the soul for the beyond. The social effect of the religious temperament, however potentially considerable, was cramped by excessive otherworldliness and distrust in the intellect accentuated to obscurantism.

The secularist centuries weighed the balance down very much in the opposite direction. They turned the mind of the race wholly earthwards and manwards, but by insisting on intellectual clarity, reason, justice, freedom, tolerance, humanity, by putting these forward and putting the progress of the race and its perfectibility as an immediate rule for the earthly life to be, constantly pressed towards and not shunting off the social ideal to doomsday to be miraculously effected by some last divine intervention and judgment, they cleared the way for a collective advance. For they made these nobler possibilities of mankind more imperative to the practical intelligence. If they lost sight of heaven or missed the spiritual sense of the ideals they took over from earlier ages, yet by this rational and practi-

cal insistence on them they drove them home to the thinking mind. Even their too mechanical turn developed from a legitimate desire to find some means for making the effective working of these ideals a condition of the very structure of society. Materialism was only the extreme intellectual result of this earthward and human turn of the race mind. It was an intellectual machinery used by the Time-spirit to secure for a good space the firm fixing of that exclusive turn of thought and endeavour, a strong rivet of opinion to hold the mind of man to it for as long as it might be needed. Man does need to develop firmly in all his earthly parts, to fortify and perfect his body, his life, his outward-going mind, to take full possession of the earth his dwelling-place, to know and utilise physical Nature, enrich his environment and satisfy by the aid of a generalised intelligence his evolving mental, vital and physical being. That is not all his need, but it is a great and initial part of it and of human perfection. Its full meaning appears afterwards; for only in the beginning and in

the appearance an impulse of his life, in the end and really it will be seen to have been a need of his soul, a preparing of fit instruments and the creating of a fit environment for a diviner life. He has been set here to serve God's ways upon earth and fulfil the Godhead in man and he must not despise earth or reject the basis given for the first powers and potentialities of the Godhead, When his thought and aim have persisted too far in that direction, he need not complain if he is swung back for a time towards the other extreme, to a negative or a positive, a covert or an open materialism. It is Nature's violent way of setting right her own excesses in him.

But the intellectual force of materialism comes from its response to a universal truth of existence. Our dominant opinions have always two forces behind them, a need of our nature and a truth of universal existence from which the need arises. We have the material and vital need because life in Matter is our actual basis, the earthward turn of our minds because earth is and was intended to be the foundation here for the workings of

the Spirit. When indeed we scan with a scrupulous intelligence the face that universal existence presents to us or study where we are one with it or what in it all seems most universal and permanent, the first answer we get is not spiritual but material. The seers of the Upanishads saw this with their penetrating vision and when they gave this expression of our first apparently complete, eventually insufficient view of Being, "Matter is the Brahman, from Matter all things are born, by Matter they exist, to Matter they return," they fixed the formula of universal truth of which all materialistic thought and physical science are a recognition, an investigation, a filling in of its significant details, elucidations, justifying phenomena and revelatory processes, the large universal comment of Nature upon a single text.

Mark that it is the first fact of experience from which we start and up to a certain point an undeniable universal truth of being. Matter surely is here our basis; the one thing that is and persists, while life, mind, soul and all else appear in it as a secondary

phenomenon, seem somehow to arise out of it, subsist by feeding upon it,—therefore the word used in the Upanishads for Matter is *annam*, food,—and collapse from our view where it disappears. Apparently the existence of Matter is necessary to them, their existence does not appear to be one whit necessary to Matter. The Being does present himself at first with this face, inexorably as if claiming to be that and nothing else, insisting that his material base and its need shall first be satisfied and, until that is done, grimly persistent with little or with no regard for our idealistic susceptibilities and caring nothing if he breaks through the delicate net of our moral, our aesthetic and our other finer perceptions. They have the hope of their reign, but meanwhile this is the first visage of universal existence and we have not to hide our face from it any more than could Arjuna from the terrible figure of the Divine on the battle-field of Kurukshetra, or attempt to escape and evade it as Shiva, when there rose around him the many stupendous forms of the original Energy, fled from the vision of it to this and that quarter,

forgetful of his own godhead. We must look existence in the face in whatever aspect it confronts us and be strong to find within as well as behind it the Divine.

Materialistic science had the courage to look at this universal truth with level eyes, to accept it calmly as a starting-point and to enquire whether it was not after all the whole formula of universal being. Physical science must necessarily to its own first view be materialistic, because so long as it deals with the physical, it has for its own truth's sake to be physical both in its standpoint and method ; it must interpret the material universe first in the language of the material Brahman, because these are its primary and its general terms and all others come second, subsequently, are a special syllabary. To follow a self-indulgent course from the beginning would lead at once towards fancies and facilities. Initially, science is justified in resenting any call on it to indulge in another kind of imagination and intuition. Anything that draws it out of the circle of the phenomena of objects, as they are represented to the senses, and their

instrumental prolongations, and away from the dealings of the reason with them by a rigorous testing of experience and experimentation, must distract it from its task and is inadmissible. It cannot allow the bringing in of the human view of things; it has to interpret man in the terms of the cosmos, not the cosmos in the terms of man. The too facile conclusion of the idealist that since things only exist as known to consciousness, they can exist only by consciousness and must be creations of the mind, has no meaning for it; it first has to inquire what consciousness is, whether it is not a result rather than a cause of Matter, coming into being, as it seems to do, only in the frame of a material inconscient universe and apparently able to exist only on the condition that has been previously established. Starting from Matter, science has to be at least hypothetically materialistic.

When the action of the material principle, the first to organise itself, has been to some extent well understood, then can this science go on to consider what claim to be quite other terms of our being, life and mind,

But first it is forced to ask itself whether both mind and life are not, as they seem to be, special consequences of the material evolution, themselves powers and movements of Matter. After and if this explanation has failed to cover and to elucidate the facts, it can be more freely investigated whether they are not quite other principles of being. Many philosophical questions arise, as, whether they have entered into Matter and whence or were always in it, and if so, whether they are for everless and subordinate in action or are in their essential power greater, whether contained in it only or really containing it, whether subsequent and dependent on its previous appearance or on y that in their apparent organisation here but in real being and power anterior to it and Matter itself dependent on the essential pre-existence of life and mind. A greater question comes, whether mind itself is the last term or there is something beyond, whether soul is only an apparent result and phenomenon of the interaction of mind, life and body or we have here an independent term of our being and of all being, greater,

anterior, ultimate, all matter containing and contained in a secret spiritual consciousness, spirit the first, last and eternal, the Alpha and the Omega, the OM. For experiential philosophy either Matter, Mind, Life or Spirit may be the Being, but none of these higher principles can be made securely the basis of our thought against all intellectual questioning until the materialistic hypothesis has first been given a chance and tested. That may in the end turn out to have been the use of the materialistic investigation of the universe and its inquiry the greatest possible service to the finality of the spiritual explanation of the universe. In any case materialistic science and philosophy have been after all a great and austere attempt to know dispassionately and to see impersonally. They have denied much that is being reaffirmed, but the denial was the condition of a severer effort of knowledge and it may be said of them, as the Upanishad says of Bhrigu the son of Varuna *sa ś taptwā annam brahmeti vyajānāt.* "He having practised austerity discovered that Matter was the Brahman."

The gates of escape by which a knowledge starting from materialism can get away from its self-immuring limitations, can only be casually indicated. I shall take another occasion to show how the possibility becomes in eventual fact a necessity. Physical science has before its eye two eternal factors of existence, Matter and Energy, and no others at all are needed in the account of its operations. Mind dealing with the facts and relations of Matter and Energy as they are arranged to the senses in experience and continuative experiment and are analysed by the reason, would be a sufficient definition of physical science. Its first regard is on Matter as the one principle of being and energy only a phenomenon of Matter; but in the end one questions whether it is not the other way round, all things the action of Energy and matter only the field, body and instrument of its workings. The first view is quantitative and purely mechanical, the second lets in a qualitative and a more spiritual element. We do not at once leap out of the materialistic circle, but we see an opening in it which may widen into an

outlet when, stirred by this suggestion, we look at life and mind not merely as phenomenon in Matter, but as energies, and see that they are other energies than the material with peculiar qualities, powers and workings. If indeed all action of life and mind could be reduced, as it was once hoped, to none but material, quantitative and mechanical, to mathematical physiological and chemical terms, the opening would cease to be an outlet; it would be choked. That attempt has failed and there is no sign of its ever being successful. Only a limited range of the phenomena of life and mind could be satisfied by a purely bio-physical, psycho-physical or bio-psychical explanation, and even if more could be dealt with by these data, still they would only have been accounted for on one side of their mystery, the lower end. Life and Mind, like the Vedic Agni, have their two extremities hidden in a secrecy, and we should by this way only have hold of the tail-end, the head would still be mystic and secret. To know more we must have studied not only the actual or possible action of body and matter on mind and life, but

explored all the possible action^o of mind too on body and life ; and that opens undreamed vistas. And there is always the vast field of the action of mind in itself and on itself, which needs for its elucidation another, a mental, a psychic science.

Having examined and explained Matter by physical methods and in the language of the material Brahman,—it is not really explained, but let that pass,—having failed to carry that way of knowledge into other fields beyond a narrow limit, we must then consent to scrutinise life and mind by methods appropriate to them and explain their facts in the language of the vital and mental Brahman. We may discover then where and how these tongues of the one existence render the same truth and throw light on each other's phrases, and discover too perhaps another, high, brilliant and revealing speech which may shine out as its definitive all-explaining word. That can only be if we pursue these other sciences too in the same spirit as the physical, with a scrutiny not only of their obvious actual phenomena, but of all the countless untested potentialities

of mental and phschie energy and with a free unlimited experimentation. We shall find out that their ranges of the unknown are immense. We shall perceive that until the possibilities of mind and spirit are better explored and their truths better known, we cannot yet pronounce the last all-ensphering formula of universal existence. Very early in this process the materialistic circle will be seen opening up on all its sides until it rapidly breaks up and disappears. Adhering still to the essential rigorous method of science, though not to its purely physical instrumentation, scrutinsing, experimenting, holding nothing for established which cannot be scrupulously and universally verified, we shall still arrive at supraphysical certitudes. There are other means, there are greater approaches, but this line of access to can lead to the one universal truth.

Three things will remain from the labour of the secularist centuries ; truth of the physical world and its importance, the scientific method of knowledge,—which is to induce Nature and Being to reveal their own way of being and proceeding, not hastening to

put upon them our own impositions of idea and imagination, *adhyāropa*,--and last though very far from least, the truth and importance of the earth life and the human endeavour, its evolutionary meaning. They will remain, but turn to another sense and disclose great issues. Surer of our hope and our labour, we shall see them all transformed into light of vaster and more intimate world-knowledge and self-knowledge.

No. 24.—Push the centre of the Cruet downwards to make the Seed Vessel.

No. 25. - The Salt-cellar is made from the Cruet by folding the loose corner of each little square to the opposite corner inside.

No. 26.—Table with cloth. Take No. 17, Fig. 100, and fold the point of each little square to its opposite corner outwards, then turn it over so that the four squares are below. Now fold each point of the form to the centre, these are the four points on which the table stands, and the Table-cloth is formed by the small squares.

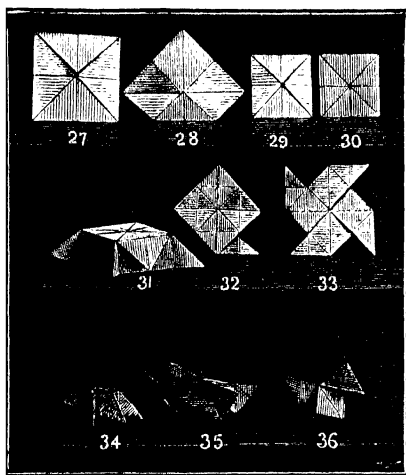


FIG. 102. Windmill form.

27 to 30. Preparation of form.

31. Table-cloth.

34. Claw.

32. Kite.

35. Double Boat.

33. Windmill.

36. Duck.

In No. 27 we see the paper folded exactly as it was in No. 12, but instead of turning the form over and folding the

points to the centre of the smooth side, we keep it with the smooth side downwards.

No. 28 shows one point folded to the centre.

No. 29 shows all the points folded to the centre.

No. 30. — Turn No. 29 over, and we see an unbroken surface, instead of the four small squares.

No. 31 shows the four corners drawn out to make a Table-cloth.

No. 32. — The Kite has one corner drawn out.

No. 33. — The Windmill has all the four corners drawn out.

No. 34. — By folding together three arms of the Windmill in one direction, and one in the other, we make the Claw.

No. 35. — Fold one of the three points of the Claw backward until it is in a line with the hind Claw, and turn it upside down for the Double Boat.

No. 36. — Turn the Claw (No. 34) upside down. Raise the centre point of the three until it makes a right angle with the hind Claw, and then fold it over *outwards* for the Duck's Head. The points on each side the "head" are folded back for the "feet".

Suppose the "Table and Cover," "Cruet," and "Salt-cellar" to have been made by three different groups respectively, the following lines would be appropriate:—

Come to dinner, children dear,
Ready stands the Table here,
With its Cover clean and white;
Surely 'tis a welcome sight.

You a Salt-cellar have made,
Knives and forks will soon be laid,
Cruets, dishes, plates as well,
Now I think we'll ring the bell.